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The Coordinated Reform of Tariffs and Domestic Indirect Taxes

Pradeep Mitra

Tariff reform for trade liberalization must be seen as part of a broader program of tax reform. Customs duties on imports should be geared chiefly to protection. Reductions in such duties to promote an outward-oriented development strategy should be offset by increases in sales/value-added taxes applied equally to imports and domestic production. That would maintain public revenues and avoid exacerbating macroeconomic difficulties.

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This paper — a product of the Public Economics Division, Country Economics Department — is part of an ongoing program in the Public Economics Division to explore the relationship between trade liberalization and the public finances in revenue-constrained economies. The paper was prepared for the World Bank Conference on Tax Policy in Developing Countries, held in March 1990. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Ann Bhalla, room N10-059, extension 37699 (47 pages).

Tariff reduction designed to move toward an outward-oriented development strategy will work only if alternative revenue sources can be found to offset revenue losses that often accompany reduced protection. The reason is that such losses can exacerbate macroeconomic difficulties, lead to delays or reversals in trade liberalization programs, and make policy change less credible.

Tariffs on imports do two things: protect domestic producers and raise public revenues. Even the poorest countries have essentially two instruments for fulfilling those two objectives: (i) customs duties and (ii) sales taxes and value-added taxes (VATs) on imports. Since the customs duty raises the price facing domestic producers of an imported good above the world price, it is a subsidy to domestic producers. Since the sales tax/value-added tax, together with the customs duty, raises the price facing users of the import above the world price, they tax domestic users. The customs duty can then serve protection objectives, while the two together can be designed to meet revenue requirements.

Opportunities for radical redesign of the incentive structure are rare. The following integrated structure of taxes cum tariffs provides a point of reference toward which less comprehensive reforms may be directed:

- A uniform basic customs duty of no more than 10-15 percent and an exemption from duty for imported inputs entering export production.
- A basic uniform VAT (preferably on consumption) — the rate determined by revenue requirements — on both domestic production and imports with agriculture exempted, particularly nonmarketed food consumed by the poor.
- A luxury or excise tax applied at a common rate to both domestic production and imports of selected items.
- Zero rating of exports under the VAT.
- Taxes on selected exports either where world demand for the country's exports is expected to remain inelastic or where the country is subject to export quotas.

It is important to view the foregoing elements as part of an interrelated package: for example, attempts to unify customs duties at levels higher than the recommended range would create administrative problems in implementing duty exemptions on inputs entering domestic production.

Coordinated reform of an existing distorted structure of tariffs and domestic taxes would include the following:

- Matching the sales and value-added tax rates on domestic production and imports, to transfer the function of protection to customs duties.
- Bringing customs duties on items for which there is no domestic production and which are therefore purely revenue-raising under the rubric of the sales tax/ value-added tax.
- Offsetting any reduction in customs duties with an equivalent increase in the sales tax/value-added tax structure — which, since that tax applies to domestic production as well as imports, would increase revenues. A smaller-than-equivalent upward adjustment in the sales value-added structure would therefore suffice if the change were required to be revenue-neutral.

More realistically, the rate structure might have to be raised beyond the point of revenue-neutrality to allow for assistance to sectors hurt by the tariff reduction. Such assistance, if extended through the budget process, would have the advantage vis-a-vis protective tariffs of being explicit and thus subject to periodic scrutiny.

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The Coordinated Reform of Tariffs and Domestic Indirect Taxes*

by
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THE COORDINATED REFORM OF TARIFFS AND DOMESTIC INDIRECT TAXES

Pradeep Mitra

Tariffs on imports protect domestic producers and raise public revenue. Thus the World Development Report 1987 finds that effective rates of protection to manufacturing in developing countries typically exceed 40 percent while the World Development Report 1988 estimates that the importance of import taxes in tax revenue is over 20 percent in Asia, sub-Saharan Africa and in the Middle East and North Africa compared to 2 percent in the industrial countries. These figures make clear that tariff reform which is intended to reduce anti-export bias and promote an outward-oriented development strategy can be viable only if alternative and administratively collectible sources of revenue can be found to offset potential revenue losses. The tradeoff between liberalization and fiscal imperatives is thus frequently central to tariff reform.

This paper argues that tariff reform must be seen as part of a broader program of tax reform. The need to adopt such a public finance perspective is argued with reference to selective reviews of country experience with trade liberalization and tax reform, protection and revenue objectives in developing countries and the instruments available to further those policy goals. The main points emerging from the analysis are as follows.

1. Since it is generally accepted that lack of supportive macroeconomic policies has led to delays or reversal in trade liberalization programs, it is important that potential losses in public revenue arising from tariff reductions be offset so as not to exacerbate macroeconomic difficulties. The common practice of pursuing tariff and tax studies independently carries the risk that the revenue implications of tariff reform and the implications for protection

and efficiency of tax reform may not be properly integrated, with negative consequences for the credibility of policy change.

2. The adoption of a more comprehensive public finance perspective on policy reform is made possible by the fact that even the poorest countries have essentially two sets of instruments for the taxation of imports: (a) customs duties and (b) sales taxes/value added taxes, that are usually levied on the customs duty-inclusive value of imports and that apply to domestic transactions as well. Since the customs duty raises the price facing producers of an import above the world price, it is a subsidy to domestic producers. Since the sales tax/value added tax, together with the customs duty, raises the price facing users of the import above the world price, they constitute a tax on domestic users. The customs duty can then serve protection objectives, while the two together can be designed to meet revenue requirements. These tax and subsidy margins play a useful role in the discussion on tariff reform under point 5 below.

3. While the opportunities for radical redesign of the incentive structure are rare, the following integrated structure of taxes cum tariffs provides a point of reference towards which less comprehensive reforms may be directed. This comprises (a) a basic customs duty at a uniform rate of no more than 10 to 15 percent, (b) a basic value added tax, preferably of the consumption type, applying at a uniform rate, depending on revenue requirements, to domestic production and imports, and exempting agriculture, in particular nonmarketed food consumed by the poorest, (c) a luxury rate or excises applying at a common rate to domestic production and imports of selected items, (d) zero rating of exports under the value added tax, (e) exemption of imported inputs entering export production from customs duty, and (f) taxes on selected exports either where

world demand for the country's exports is expected to remain inelastic or where the country is subject to export quotas. The paper argues that it is important to view the above elements as part of an interrelated package so that, for example, attempts to unify customs duties at levels higher than the recommended range [as in (a)] would create administrative problems in implementing duty exemptions on inputs entering export production [point (e)].

4. The above prescriptions must be regarded as rules of thumb that can generate broadly acceptable outcomes in terms of efficiency, equity and protection and that should be flexibly applied in the light of country circumstances and administrative capability. They are not properties of optimal tariff and tax structures. Thus the value to policy advisors of analytically-oriented studies of taxes and tariffs would be enhanced if the latter were to identify circumstances where the pursuit of such rules is likely to be inappropriate, rather than construct empirically implausible special cases where they hold exactly.

5. The coordinated reform of an existing distorted structure of tariffs and domestic taxes in accordance with the above principles will include the following components. The sales tax/VAT rates on domestic production and imports should be matched, so as to transfer the function of protection to customs duties. Customs duties on items for which there is no domestic production and which are therefore purely revenue-raising should be brought under the rubric of the sales tax/VAT. A lowering of customs duties to reduce the excess of producer prices over world prices (the element of protection), if unaccompanied by other measures, would also reduce the excess of user prices over world prices (the customs duty-cum-sales tax on users) and thus erode public revenue. Hence reduction of protection per se, interpreted as a narrowing of the wedge between

producer prices and world prices, is achieved by combining the lowering of customs duties with an equal upward adjustment to the sales tax/VAT structure to restore the tax wedge between user prices and world prices prevailing before the tariff reduction. This, however, would be revenue-enhancing because the sales tax/VAT applies to imports as well as domestic consumption, so that the higher rate structure, while exactly offsetting the revenue loss from customs duties on imports, would bring in more revenue from domestic consumption. If the objective is simply to offset the revenue losses from tariff reductions, a smaller adjustment to the sales tax/VAT structure than the one described above will suffice. More realistically, the rate structure would need to be raised somewhat beyond the point of revenue neutrality so as to allow the government to meet such demands for adjustment assistance as may arise from sectors adversely affected by tariff reductions. Such assistance, if extended via the budgetary process, would have the advantage vis-a-vis protective tariffs of being explicit and thus subject to periodic scrutiny.

I. INTRODUCTION

The Setting

1. The value of adopting an outward-oriented development strategy has found increasing acceptance among economists.[1] The move towards outward orientation requires, inter alia, that countries reduce the bias against exports caused by the extensive use of tariffs and quantitative restrictions on imports. Thus, for example, the World Development Report, 1987 found that effective rates of protection to manufacturing in the late 1970s were as high as 44% in the Philippines, 55% in Colombia and 82% in Nigeria and, with the exception of Korea and Singapore, that effective rates of protection were lower for exports vis-a-vis domestic sales.

2. It is now generally accepted that trade liberalization can be delayed or aborted in the absence of complementary macroeconomic policies, in particular appropriate fiscal policies.[2] With public sector deficits averaging 7% of GDP in developing countries,[3] it is particularly important that revenue losses arising from tariff reductions be offset by identifying alternative and administratively collectible sources of revenue so as not to exacerbate macroeconomic difficulties. That these could be potentially significant emerges from the World Development Report 1988 which estimated that the contribution of import taxes to tax revenue in 1985 was 14% in Latin America, 21% in Asia, 22% in the Middle East and North Africa and 26% in sub-Saharan Africa, as compared to 2% in industrial countries. The tradeoff between moves towards outward orientation and fiscal imperatives is thus frequently central to policy reform.

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[1]For an authoritative account, see Balassa (1989a).

[2]The relevant literature is cited in Halevi (1988).

[3]Based on a sample of 33 countries in 1986, as reported in Chhibber and K. Shirazi (1988).

Plan of the Paper

3. This paper argues that tariff reform must be seen as part of a broader program of tax reform. Section II outlines advice that is typically given on tariff and tax reform and points to instances where the two have been insufficiently coordinated. Section III looks at the instruments used by developing countries to further protection and revenue objectives. Section IV lays out the contours of tax and tariff design in the light of efficiency and equity objectives and constraints on administrative capacity in developing countries. Section V examines how those ides may be used to guide the reform of tax and tariff structures. Section VI brings together the main points of the paper.

II. WORLD BANK ADVICE

Tariff Reform

4. Trade policy reform has been an important component of the World Bank's dialogue with countries and has accounted for 30% of the conditions in adjustment lending. [World Bank (1989b)] While details vary from country to country, the core set of Bank recommendations on the reform of import policy consists in (a) converting quantitative restrictions and other forms of nontariff licensing into tariffs; (b) reducing the level and dispersion of tariffs.[4] It is recognized that such a system necessarily discriminates against exports: the bias is offset in part through a variety of schemes that exempt from tariffs imported inputs entering into export production.

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[4]A recent review [World Bank (1989b)] describes "a practical first-phase goal for reforms...is to...reduce tariffs to reasonably low levels, say to a range of 15 to 30 percent over the medium term." Another review of policy recommendations regarding tariff reform in eleven countries [Rajaram (1989)] noted that "a few reports appeared to favor a long term uniform/maximum effective rate of protection of about 20%".

5. A recent review of Bank recommendations on tariff reform [Rajaram (1989)] found however that the revenue implications were not addressed systematically. Thus, to give a few examples, a 1984 recommendation to eliminate the Special Import Tax in Morocco miscalculated the revenue impact which, together with the poor initial performance of the value added tax, led to a subsequent tariff increase. A similar situation obtained in Thailand in 1981 because proposals for alternative sources of revenue focussed on one-time increases rather than elasticity-enhancing tax reform. The revenue effect also appeared to have been underestimated in the Philippines. The government then introduced an across-the-board import tax and a domestic turnover tax to raise revenue, but this is ascribed more to the deterioration of the economy in 1983-86 than to tariff reform. The program of import liberalization was, however, stalled by those developments.

Tax Reform

6. The Bank had not till recently been active in offering tax policy advice based on a detailed assessment of tax instruments and options. Data for 1987-89 indicates, however, a more active involvement compared say to the period 1980-86. In Malawi, the Bank recommended that tariffs be reduced on competing imports and intermediate goods and eliminated altogether on noncompeting imports. The revenue losses were to be made up by raising the surtax which, with the introduction of crediting mechanisms, could be turned into a manufacturer/import level consumption tax. In Bangladesh, it was estimated that the revenue impact of tariff reduction in selected key industrial sectors would amount to roughly 1.5 percent of tax revenue. The Bank proposed a wide-ranging package of reform designed (i) to raise revenue in the short run and (ii) to enhance the elasticity of the tax system in the medium-to-long term via structural tax reform. More

generally, the recommended reform of indirect taxation proposed in various countries usually consists in moving towards a value added tax or a single-stage sales tax, with symmetric treatment of domestic production and imports.

7. A selective review of Bank involvement with tariff and tax reform studies [Rajaram (1989)] suggests that the two sets of exercises are to a large extent conducted separately. It has already been noted that tariff studies have generally not addressed revenue issues systematically. Nor has enough attention always been paid to the protective role of domestic tax-subsidy instruments that, in addition to tariffs, extend favorable treatment to local producers. In turn, tax studies, while recommending symmetric treatment of domestically produced and imported goods, have left analysis of the structure and level of protective customs duties to tariff studies. This separation has an obvious practical advantage from the point of view of the management of tasks. It also has the apparent virtue of not straining absorptive capacity of policy makers in countries where such resources are often scarce, although the policy reversals that have occurred in the examples noted above as a result of not addressing budgetary concerns potentially compromised the credibility of reform. It will be argued in this paper that a coordinated trade-cum-public finance perspective on these issues is much to be desired.[5]

III. TAX AND TARIFF INSTRUMENTS

8. The taxation of imports usually consists of (i) a customs duty that applies to the c.i.f. price and (ii) a sales tax/VAT that is levied on the

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[5]The need to integrate trade taxes with domestic taxes in a common framework has also been argued in Shalizi and Squire (1989) and Linn and Wetzel (1989).

customs duty-inclusive price. Tables 1 through 5 report the use of those (and other) instruments in Bangladesh, Malawi, Nepal, Tanzania and Uganda which, with per capita incomes of $160, $160, $160, $180 and $260 respectively in 1987, are among the poorest low income countries.[6] It may be seen that the sales tax on imports is a significant revenue source even in the three sub-Saharan African countries where import taxes do not loom as large as in the two South Asian countries.

9. The tables allow the following important points to be made. First, even the poorest countries use (at least) two different policy instruments to tax imports, a feature that has considerable significance. This point may be illustrated using a simple example. Suppose that the c.i.f. price of an imported good in local currency is 100. The customs duty is 20% and the sales tax which is levied on the customs duty-inclusive price as well as on domestic production of the good is 10%. Assuming the absence of nontariff import licensing, the price that domestic producers can charge for the good is the c.i.f. price plus customs duty, or 120. In this example, the customs duty is a measure of the subsidy extended by the incentive system to producers. The customs duty also raises the price of the good to the user above its international price (from 100 to 120), providing the basis for the standard observation that a tariff is a subsidy to a domestic producer financed by a tax on the user. Since the tax component of the customs duty raises the price to users of domestic production as well as imports, while its subsidy component applies only to domestic production, the tax revenue from users exceeds the outlay on the subsidy to producers; for this reason, the tariff is revenue-raising. The customs duty, however, is not the only tax on users of the good. That is given by the customs

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[6]World Bank (1989a).

Table 1. Composition of Indirect Tax Revenue in Bangladesh, 1987/88 a/

Tax Type \ Tax Base	Imported Goods	Domestic Goods	Total
Customs Duty	37.8	-	37.8
Sales Tax	12.4	-	12.4
Excise Duty	-	26.8	26.8
Total	50.2	26.8	77.0

a/ Figures are percent of total tax revenue.

Notes:

1. The customs duty is levied on the c.i.f. value of imports. The sales tax, which applies only to imports, is levied on the customs duty-inclusive value.

2. The excise duty is levied on the ex-factory price of domestically produced goods.

Table 2. Composition of Indirect Tax Revenue in Malawi, 1988 a/

Tax Type \ Tax Base	Imported Goods	Domestic Goods	Total
Import Duties	17.8	-	17.8
Surtax	13.7	20.2	33.9
Excise Duty	-	3.5	3.5
Total	31.5	23.7	55.2

a/ Figures are percent of total tax revenue.

Notes:

1. The import duty is levied on the c.i.f. value of imports.

2. The excise duty is levied on the ex-factory price of domestically produced goods.

3. The surtax is levied on the import duty-inclusive price of imports and the excise duty-inclusive ex-factory price of domestically produced goods.

Table 3. Composition of Indirect Tax Revenue in Nepal, 1988/89 a/

Tax Type \ Tax Base	Imported Goods	Domestic Goods	Total
Import Duty	35.7	-	35.7
Excise Tax	0.7	13.6	14.3
Sales Tax	11.0	11.8	22.8
Total	47.4	25.4	72.8

a/ Figures are percent of total tax revenue.

Notes:

1. The import duty is levied on the c.i.f. value of imports. There is a two-tiered structure with only the first slab applying to imports from India and both the first and second slabs applying to imports from other countries.

2. The excise duty is levied on the ex-factory price for domestic goods. It applies to imports and domestic goods at the same rate.

3. The sales tax is levied on the excise and import duty inclusive c.i.f. value for imports and the excise tax-inclusive ex-factory price for domestic goods. It applies to import and domestic goods at the same rate.

4. Sales tax revenue collected from imported inputs is reported as revenue from domestic goods, so that the 11 percent share reported above is an underestimate of sales tax collected from imports.

Table 4. Composition of Indirect Tax Revenue in Tanzania, 1988/89 a/

Tax Type \ Tax Base	Imported Goods	Domestic Goods	Total
Import Duty	18.6	-	18.67
Excise Tax	-	-	-
Sales Tax	17.2	55.6	72.8
Total	35.8	25.4	91.4

a/ Figures are percent of total tax revenue.

Notes:

1. The import duty is levied on the c.i.f. value of imports.

2. The sales tax is levied on the import-duty inclusive value of imports and the ex-factory price of domestically produced goods. It treats imports and domestically produced goods in a symmetric way.

3. An excise tax that applied to both domestic and imported goods was introduced in 1989/90. Revenue figures are not as yet available for that year.

Table 5. Composition of Indirect Tax Revenue in Uganda, 1988/89 a/

Tax Type \ Tax Base	Imported Goods	Domestic Goods	Total
Import Duty	17.7	-	17.7
Excise Duty	-	10.9	10.9
Sales Tax b/	12.0	27.9	39.9
Total	29.7	38.8	68.5

a/ Figures are percent cf tax revenue.

b/ Imports were subject to a higher rate of sales tax.

Notes:

1. The import duty is levied on the c.i.f. value of imports.

2. The excise duty is levied on the ex-factory price of domestic goods.

3. The sales tax is levied on the import-duty inclusive c.i.f. value of imports and the excise-duty inclusive ex-factory price of domestic goods. There were a number of items for which the sales tax rate on imports exceeded that on the corresponding domestic product. It is understood however that a recent change has led to symmetric treatment of domestically produced and imported goods.

duty plus the sales tax, which together raise the price from 100 to 132, (the latter figure being arrived at by adding 10% to the customs duty-inclusive price). Hence, the tax on the user of the good is 32.

10. The example suggests that the two instruments could be used to further the two objectives of providing protection and raising revenue. Provided, as in the example and in fact in Nepal and Tanzania (see Tables 3 and 4), that the sales tax/VAT applies at an equal rate to imports and domestic production, the customs duty may be seen as playing a primarily protective role, with revenue objectives being met by the customs duty together with the sales tax/VAT. Thus, the level and structure of customs duties should be set with reference to whatever protection objectives are deemed by the analyst to be supportable. The sales tax/VAT can then be set at a level that, together with the customs duty, satisfies the government's revenue requirements.

11. Second, although the excise tax features separately in all the countries, it may be thought of as being a combination of both the customs duty as well as the sales tax. This is because it has revenue raising and protective aspects as well. The first is obvious. In Nepal (see Table 3), for example, it has a purely revenue-raising function. The second may be seen from its operation in Malawi and Uganda, (see Tables 2 and 5) where the excise duty, by applying to domestic production only, subtracts from the protection afforded by import duties. This effect could be reproduced by adjusting import duties and by offsetting the revenue impact by adjusting the surtax/sales tax.

12. Third, faced with an array of duties and surcharges on imports, it is sometimes tempting to recommend that they be consolidated into a single levy for administrative simplicity. The above analysis shows that this would be a mistake. Thus, customs duties that apply to imports alone fulfil a different

role from sales taxes that apply to imports as well as domestic production. As mentioned earlier, the two instruments are aimed at two objectives, viz., protection and revenue-raising. Since both instruments are in use in the poorest countries and, a fortiori, elsewhere, consolidation would result in giving up one instrument and reduce the possibility of treating tariffs and taxes in a consistent way.

IV. THE DESIGN OF TAXES-CUM-TARIFFS

13. The simple example of Section III showed that

- the difference between the producer price and the world price of a good is the subsidy to producers, while
- the difference between the consumer price and the world price of a good is the tax on consumers.

This allows us to identify the customs duty with the producer subsidy and the customs duty-plus-sales tax with the consumer tax.[7]

14. This section develops some basic principles of coordinated tax and tariff design with a view to clarifying ideas as well as providing a point of reference towards which reforms may be directed. We first consider the wedge between producer prices and world prices introduced by customs duties and then

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[7]It will be recalled that the shadow price, or social opportunity cost, of a traded good for a small economy is the world price, adjusted for trade and transport margins. Hence the above statement has the appealing property of measuring the producer and consumer distortions introduced by the tax-cum-tariff system vis-a-vis social opportunity costs. While traded goods are the primary focus of tariff reform analysis, it is clear that changes in taxes and tariffs consequent on policy reform will affect nontraded goods as well. It may therefore be noted, paralleling the description for traded goods, that the wedge introduced between producer prices and shadow prices of nontraded goods corresponds to a subsidy, while that between consumer prices and shadow prices of nontraded goods corresponds to a tax.

turn to the wedge between consumer prices and world prices caused by the combined operation of customs duties and sales taxes/VAT.

Producer Prices and World Prices

15. A classical argument in favor of wedges between producer prices and world prices is provided by the infant industry argument.[8] A variant of this runs as follows. It is argued that the volume of gross output confers "learning by doing" type benefits. These eventually lower costs of production and allow the industry to become competitive in the future. The argument is therefore intertemporal: the economy incurs the costs of industrial promotion today in return for benefits in terms of higher productivity tomorrow. However, this does not necessarily translate into an argument for government intervention. Thus, if private firms can invest in high cost production in the early years and appropriate the benefits of higher productivity in later years, no intervention is necessary. Institutional restrictions on appropriability and capital market imperfections may however preclude such arrangements from being made. Economic theory would then argue for intervention in labor and capital markets to correct those distortions, without restricting trade in any way.[9] However, the administrative capacity to identify and extend subsidies in factor markets may be lacking in developing countries. While this might suggest a welfare-inferior policy of production subsidies extending to all production whether for domestic sales or exports, it is in practice the case that developing countries find it easier to assist their producers via an even worse policy. This of course is tariff protection which encourages only domestic production and

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[8]For a detailed account, see Corden (1974).

[9]For a careful statement of the appropriate qualifications, see Baldwin (1969).

discriminates against exports. Its widespread use may be explained with respect to its revenue-raising feature as well as the advantage of extending assistance to favored constituencies in a relatively inconspicuous way.[10]

16. The infant industry argument has also been seen to encounter certain difficulties in practice. A recent Bank report on trade policy reform observed that "experience with protection policies and their general outcome in the majority of developing countries suggests that infant industry arguments are generally used as a rationale by politically powerful protection-seeking industries, without any serious consideration of whether and under what conditions the economic benefits of the protection will exceed its economic costs. Thus the policies seldom recognize that if the initial economic costs are to be offset, the learning-by-doing benefits (weighted for risks and discounted for the opportunity cost of the capital invested) must appear in a period of, say, five to seven years."[11] The report goes on to state that for these and associated reasons, "the World Bank has usually recommended that protection not be given to support industries".

Structure of Protection

17. In practice, advisors on tariff design will typically be faced with import tariffs that are "justified" via a combination of learning-by-doing arguments unaddressed by other, more targeted policies, effective lobbying by special interest groups with no particular claim to "infancy" and political imperatives to keep subsidies hidden (as is the case with tariffs) rather than

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[10]It is recognized that the administrative capacity to extend domestic subsidies as part of an industrial promotion policy as opposed to export-discouraging tariff policies will vary across countries.

[11]See World Bank (1989).

transparent.[12] Since evidence on learning-by-doing and related externalities across sectors is notoriously elusive, governments experience considerable difficulty in identifying potentially successful sectors and products for special encouragement. Economists have then recommended that assistance be made uniform, on the grounds either that, in the absence of compelling evidence to the contrary, learning effects might as well be assumed to be roughly the same across sectors, or that a uniform structure of assistance is less vulnerable to special pleading.[13] Higher timebound assistance may be provided for a few selected sectors where there are demonstrable learning externalities.

Level of Protection

18. It will be recognized that the above arguments on the structure of protection would be relevant in arriving at a judgment, not only on the structure of assistance as discussed above, but on its level as well. One argument, due to Little, Scitovsky and Scott, sees the need for special assistance to manufacturing as deriving from the excess of the market wage over the real cost of labor due to labor market distortions and savings constraints on the economy.[14] Thus, if wage costs as a proportion of gross value added were on average 15 percent and the real cost of labor 50 percent of the market wage (which is likely to be a generous allowance), the extent to which value added should be assisted is of the order of 5 to 10 percent. The authors further argue that in the least developed countries, if the wages of unskilled labor

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[12]We ignore here the departures from free trade that may be justified by the "new" trade theory. Their relevance for developing countries remains to be established. See, for example, Srinivasan (1989).

[13]For a derivation of the relationship between learning-by-doing and production subsidies, see Mitra (1989). The relationship between structures of incentives and lobbying however remains to be demonstrated.

[14]See Little, Scitovsky and Scott (1970).

were as high as 40 percent of value added, the justifiable level of assistance to value added could be 20%. While these estimates should be regarded as no more than illustrative, given the considerable variation in country circumstances governing the relationship between market wages and the real cost of labor, they provide a rough range within which the average level of protective tariffs might lie. It may be noted that while this range overlaps that reported as being characteristic of Bank recommendations (see footnote 4), the latter is somewhat higher.

Summary of Tariff Recommendations

19. The discussion on protective tariffs may be summarized in the observation that a uniform tariff at a level not exceeding 10 to 15 percent could be adopted as an acceptable rule of thumb in countries where administrative and revenue constraints preclude extensive use of better targeted instruments. While such a structure of incentives discriminates against exports, the 10 to 15% range is thought by practitioners to be low enough so as to limit the extent of discrimination. The discrimination may be partly offset by granting exporters duty free access to intermediate inputs. Both common sense and experience suggest that practical schemes that give effect to such proposals with regard to imported inputs (duty drawbacks, exemptions, bonded warehouses, duty free zones, etc.) are easier to administer when tariffs are set at low levels. This has two significant implications.

The Treatment of Intermediate Inputs

20. First, access to duty free imported inputs on the part of exporters implies that domestic producers of such inputs would not be able to compete if they were to charge duty-inclusive prices. Thus, for, example, if garment exporters can import fabrics free of customs duties, they would have no

incentive to purchase locally-produced fabrics at duty-inclusive prices. Hence countries have attempted to allow an "indirect" exporter such as the local producer of fabrics to import part of his input requirements free of customs duty. This would offer no protection to domestic producers of fabrics on that portion of their sales going to garment exporters. If successful, however, the policy could develop backward linkages and deepen the benefits flowing from outward orientation.

21. Second, the difficulty of granting duty free access at high tariff levels implies that attempts to unify tariffs at levels higher than the 10 to 15 percent range cannot be part of the recommended design. This has generated the following problem to which some recent work has been addressed. Consider a situation where tariffs on final goods are 30%, possibly (although this is not necessary to the argument) as a result of previous reform. Tariffs on intermediate goods entering into the production of such final goods are low and, for purposes of this argument, may be taken to be zero. Effective protection to import-substituting final goods is therefore much higher than may be "justified" on learning-by-doing or other grounds. It is assumed that, for reasons not usually specified, that the tariff may not be reduced any further. Attention must therefore be directed to indirect ways in which protection may be reduced. Broadly speaking, two kinds of solutions have been offered. The first, due to Harberger (1988), observes that an increase in the tariff on intermediate goods would be one solution.[15] In fact, if an intermediate good accounts for x percent of the value of the final good under free trade, a tariff on the intermediate good at a level (100/x) times 30% would drive the effective

[15]The selective review by Rajaram (1989) suggests that tariff increases on intermediate goods have been recommended in certain countries.

protection on final goods to zero. Since $x < 100$, this level of tariff on the intermediate good would be higher than that on the final good. Harberger does not in fact recommend that intermediate good tariffs be set at that level. Instead, it is suggested that a uniform tariff on intermediate and final good imports is likely to be a satisfactory compromise. The second, due to Shalizi and Squire (1989), is to impose an additional domestic tax on the production of final goods without raising the tariff on intermediate goods.

22. It may be observed that both solutions are revenue-raising and do not therefore have adverse budgetary consequences. In fact, although this is not mentioned in either paper, the extra revenue could be used if necessary to meet demands for adjustment assistance to final good producers adversely affected by the reduction of protection. We return to this point in Section V. The first solution, by unifying the tariff structure at the "unalterable" level of 30 percent, runs the considerable risk of making it difficult for developing country administrators to implement schemes allowing exporters duty free access to intermediate inputs: the inducements to "leakage" from bonded warehouses and the likelihood of fraudulent claims for duty drawback are too great. It also offers considerable protection to domestic production of intermediate goods. In contrast, the second solution, by not raising intermediate good tariffs, does not complicate duty exemption procedures for exports. However, it offers no protection to intermediate goods and does not unify tariffs at a common level. Under this scheme, there are two sets of tariffs: a higher uniform rate for final goods and a lower uniform rate (possibly zero) for intermediate goods, complemented by an additional levy on domestic production of final goods.[16]

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[16]It may be noted that this would be an excise tax with negative consequences for protection of final goods. See paragraph 11 in Section III.

23. It is a feature of both solutions that the protection of intermediate goods does not seem to be an issue. Harberger sees the tariff on intermediates principally as an instrument to adjust the effective protection to final goods, while it is implicit in Shalizi and Squire that the need to protect intermediates is not seen as important in the sub-Saharan African countries under discussion. If therefore there are no particular grounds for protecting intermediate goods, and the only constraint is the presence of minimum "unalterable" tariffs on final goods, how is tariff design to be modified? It has been pointed out that the uniformity argument is based on the absence of compelling empirical evidence on sectorally differentiated learning-by-doing or externality arguments. If protection of intermediates is then not relevant, it is preferable to have low protection for final goods and no protection for intermediates. If this cannot be achieved by lowering final goods tariffs (but see paragraph 24), then, faced with the real possibility of injury to exporters and a consequent threat to outward orientation, it would be desirable to have an additional domestic tax to offset the high effective protection to final goods that would otherwise result. On the other hand, if intermediates are deserving of protection, their tariff rates should be increased to 10-15% levels and an excise tax imposed if necessary on domestic production of final goods as well. The answer to whether intermediate tariffs should be raised from zero to 10-15% therefore turns on whether intermediates are to be protected in their own right.

24. It may also be noted that both Harberger and Shalizi-Squire assume without further discussion that while the reduction of final good tariffs is ruled out, it is possible to increase intermediate good tariffs or to levy additional domestic taxes on final goods respectively. Before endorsing those

solutions, it is worth enquiring what exactly is the basis for the unalterability of the final good tariff. If, for example, it may not be reduced because domestic producers of final goods wish to maintain a minimum level of protection, then those producers may be equally successful in blocking either of the above proposals which adopt "indirect" methods to reduction of that level of protection. In that case, it may be no more difficult to press directly for the reduction of nominal tariff rates on final goods.

Consumer Prices and World Prices

25. We turn next to the wedge between consumer prices and world prices, given by the customs duty-plus-sales tax. The motivation for this wedge in the absence of the lump-sum taxes of classical economic analysis is to raise revenue. This has the consequence that the government's revenue needs determine the average level of this wedge, while standard considerations of efficiency and equity guide its structure.

26. In a one-consumer economy with an assumed absence of lump-sum tax instruments it is desirable to raise revenue by taxing more (less) heavily goods that are relatively complementary (substitutable) with leisure, where leisure is understood to represent an untaxed time endowment.[17] Thus, if all goods were equally substitutable for leisure, a uniform tax structure would be desirable. In the more realistic many-consumer economy, the determinants of the desired structure of taxation depends on two factors: (i) substitution possibilities with leisure as before, and (ii) variations in consumption patterns among different consumers and income groups. This second consideration introduces

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[17]The result follows from a desire to tax the consumer's endowment. It is common to choose leisure as the endowment good. It could equally be interpreted as nonmarket time. For a more careful statement of these conditions, see Stern (1987).

distributional considerations into the analysis in an essential way. Thus, uniform taxation would be desirable if all goods were equally substitutable for leisure and if there were no variation in consumption patterns across different households. These conditions are implausibly stringent. But they can be relaxed if other instruments are available to the government. Thus, if there is a well-functioning income support scheme and income taxation that can appropriately target the basis of differences among households, it may be shown that uniform taxation may under certain circumstances continue to be desirable even in a many-consumer economy.

27. Literally interpreted, these prescriptions would call for a complicated structure of tax rates that could not be administered effectively. However, analysis comparing optimal and uniform tax structures[18] and country experience suggest that broadly acceptable outcomes may be obtained by implementing the following set of recommendations.

Structure of Consumption Taxes

28. First, it would be desirable to tax consumption over as large a part of the economy as administrative constraints permit and to do so at a uniform rate. This does not discriminate on the basis of complementarity and substitutability relationships with leisure endowments but since such information is extremely difficult to obtain, it is not uncommon to assume that all goods are equally substitutable with leisure. The situation is somewhat analogous to the earlier one where, in the absence of evidence on differentiated learning effects across infant industries, it was assumed that they are equally strong. However, given the limited reach of taxation in developing countries,

[18]See, for example, the calculations reported in Ebrahimi and Heady (1988) and Mitra (1990).

the uniform tax will not in practice apply to all sectors at the same rate. Agriculture will be exempt from taxation except for its purchase of taxed inputs as will be enterprises in the informal sector and many services. Once again, the situation varies across developing countries. The middle income countries of Latin America generally administer a value added tax on consumption that extends through the retail level to the point of final consumption. In contrast, the Asian countries with the exception of Korea and the Philippines, and the low income countries of sub-Saharan Africa administer a VAT that extends only to the manufacturers' level.

29. Second, given the absence of well functioning income support mechanisms and the undeveloped nature of the income tax, especially in the lower income countries, it is necessary to allow exemptions and some differentiation in the rate structure of indirect taxes in order to accommodate distributional goals. Thus, the exemption of nonmarketed food in particular ensures that the tax system has distributionally acceptable consequences. However, the requirement that the indirect tax system not be expected to serve too many objectives, together with administrative considerations, dictate that a proliferation of rates be avoided.

30. Reference has already been made above to the desirability of taxing consumption. This is done under the VAT by allowing firms credit for taxes paid not only on raw materials but on capital goods as well.[19] This form of tax also

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[19]VAT systems which disallow credit for taxes paid on capital goods--the so-called "income type" VATs are generally not used. Exceptions among LDCs are Argentina and Peru and, to some extent, Turkey. Income type VATs by definition credit taxes paid on capital goods purchases only when the latter depreciate: their implementation therefore requires maintaining depreciation accounts. In practice, however, the depreciation provisions used in Argentina and Peru are very generous. In contrast, VATs of the "gross product" type, as practiced in Finland and Morocco, do not allow tax credit on depreciation.

allows exporters refunds on taxes paid on capital goods, thereby enhancing competitiveness and allowing the benefits of outward orientation to be more fully reaped.

31. The ensuing discussion makes a distinction between exemption and zero-rating and requires a brief explanation. Exempted sectors, by not being part of a VAT, do not pay taxes on their output. By the same token, they cannot claim credit for taxes paid on their inputs. Hence exempted sectors are taxed on their inputs rather than on their outputs, whereas sectors under the VAT are taxed on their output rather than on their inputs. Zero-rated sectors, on the other hand, are exempted from taxation on both their inputs as well as on their outputs. Zero-rating therefore offers a precise way of according relief from taxation.

32. The VAT used by most countries either has a zero rate or an exemption applying to necessities, a standard rate for the majority of sectors and a higher rate applicable to luxury items and those goods whose consumption the authorities wish to discourage. Table 6 provides some examples. It shows the main rates of VAT and additional rates applying to a subset of goods in the EEC countries (which have the longest experience of using VAT), other European countries, selected Latin American countries, and in New Zealand, Taiwan (China), Indonesia, and Korea. The rates shown are those that apply to domestic sales; virtually all of the countries zero-rate exports. The largest number of different rates is seven (in Belgium), but two or three rates are more common. In Asia, Indonesia has a single rate while Korea and Taiwan, China which began with single rates now have three rates.

33. All the countries listed in the table have additional taxes on particular commodities. These are separate from the VAT and are therefore not

Table 6. The Rate Structure of VAT in Selected Countries

	Main Rate	Other VAT Rates	Number of Rates
Argentina	18	9	2
Austria	20	10, 32	3
Belgium	19	1, 6, 17, 25, 33, 0	7
Denmark	22	0	2
France	18.6	2.1, 4.5, 5.7, 33.3	5
Germany	14	7, 2	3
Greece	18	3, 6, 36	4
Hungary	25	15	2
Indonesia	10	-	1
Ireland	25	2.2, 10, 0	4
Israel	15	6.5	2
Italy	18	2, 9, 38, 0	5
Korea	10	2, 3.5	3
Luxembourg	12	3, 6	3
Netherlands	20	6, 0	3
New Zealand	10	-	1
Norway	20	11.11	2
Portugal	16	8, 30	4
Spain	12	6, 33, 0	3
Sweden	23.46	3.95, 12.87, 0	4
Taiwan, China	5	15, 25	3
United Kingdom	15	0	2

Source: A. A. Tait, Value added tax: International Practice and Problems, (International Monetary Fund: Washington, D.C. (1988).

subject to refund. In the European Community these additional taxes are mainly in the form of excise taxes on tobacco, alcohol, gasoline and diesel oil. The rates vary widely from one country to another, but are often higher than the VAT levied at either 10 percent of 20 percent on goods that are regarded as luxuries. In Korea, there is a Special Excise Tax that is levied at rates between 5 percent and 100 percent on selected goods.

34. Thus, distributional objectives may be accommodated through a second or "luxury" rate within the value added tax or by imposing excises on luxuries entering final consumption, together with items such as cigarettes, alcohol and petroleum products.[20] Once again, the extent of differentiation in the rate structure must be chosen in the light of international experience and the country's administrative capabilities. However, it is important to ensure that the standard and luxury rates apply symmetrically to domestic production and to imports, thus ensuring that the task of protection is left to customs duties.

Summary of Tax Recommendations

35. The discussion on the wedge between consumer prices and world prices, may be summarized in the observation that this should be set (i) at a single rate for all transactions that the tax administration is able to reach, with exemptions for items such as nonmarketed food that are consumed by the poorest and (ii) at higher rates for luxuries and other goods whose consumption the government wishes to discourage, with the extent of differentiation being dictated by administrative capacity.

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[20]International opinion is somewhat divided as to what framework is appropriate for the tax treatment of luxuries and other goods whose consumption the government wishes to discourage. One option is the incorporation of luxury rates on income-elastic goods within the VAT, with additional sumptuary excises on selected items. A second option is the use of a single rate VAT with sumptuary excises outside the VAT.

36. It has already been mentioned that the wedge between consumer prices and world prices to which the above discussion refers is brought about through the operation of the customs duty plus the sales tax/VAT. Recall the earlier example of paragraph 9 where the c.i.f. pri. of an import in local currency is 100, the customs duty is 20% and the sales tax 10%. Since the latter tax is levied on the customs duty-inclusive price (120) rather than the world price, consumer prices could be raised by a uniform proportion over world prices essentially only through a uniform rate of customs duty (which raises producer prices by an equal proportion over world prices) and a uniform rate of sales tax/VAT (which raises consumer prices by an equal proportion over world prices). That proportion would be given in this example by (1.2 x 1.1) - 1 = 0.32. Luxury rates or sumptuary excises would apply on top of this for selected commodities. This consideration further underlines the importance of adopting an integrated perspective in determining a desirable structure of customs duty and sales tax/VAT.

Exports

37. The summaries in paragraphs 19 and 35 did not pay detailed attention to the tax treatment of exports, except to suggest that inputs entering export production not be liable for customs duty or value added tax. There are circumstances, outlined below, when the taxation of exports is justified. However, to the extent that exports are already implicitly taxed via import tariffs, these arguments should be used with considerable care.

38. First, a classical argument is provided by inelasticity in world demand for a country's exports. As the above formulation makes clear, however, the relevant elasticity is not that of world demand as a whole, but the demand for the country's exports. Competition among countries ensures that the latter

will usually be considerably more elastic than the former, weakening the argument for significant export taxation. It is also necessary to remember that long run demand elasticities substantially exceed short run demand elasticities.[21]

39. A second argument for export taxation is provided by the existence of a quota on a country's exports or because of "voluntary" export restraints. Its purpose is to tax quota profits and it should be set at a level that makes exports equal the quota in question. Examples are provided by the Multifiber Arrangement and various commodity agreements.

40. A third argument for export taxation arises from restrictions on domestic tax possibilities. Thus, constraints on the possibilities of taxing agricultural land or income can justify the taxation of agricultural exports.[22] These can either be explicit or be implemented via agricultural marketing boards that set prices received by farmers below international prices.

41. It is noted in the World Development Report 1988 that export taxes were used in at least fifty three of the seventy four countries singled out for a study of such taxes. The evidence also suggests that they are set at levels considerably in excess of those justified on grounds of demand inelasticity or the need to substitute for unavailable land or agricultural income taxes.

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[21]These observations are confirmed by Imran and Duncan (1988) who present the relevant information for cocoa, tea, coffee and natural rubber.

[22]For a review of the comparison between export taxes and land taxes, see Skinner (1990).

Optimal Policies vs. Rules of Thumb[23]

42. Before concluding this section, it must be pointed out that the prescriptions outlined here are be seen, not as characterizations of optimal policies, but as rules of thumb for policy making that yield broadly acceptable outcomes with regard to efficiency, equity and protection, while being implementable with the administrative resources available to developing countries. In contrast, Harberger (1988) has attempted to justify the optimality of uniform tariffs. In what follows, we examine his basic argument.

43. Harberger's argument in favor of uniform tariffs is based on the notion that this guarantees efficiency. The reason this argument is somewhat difficult to assess is that, notwithstanding references to "the protectionist motive", the paper nowhere states in what form one should think about protection either as an objective or as a constraint.

44. The argument in favor of uniform tariffs is motivated by the observation that "the uniform tariff goes on to point out the absurdity (from an economic point of view) of paying a domestic resource cost (DRC) of 22 pesos per dollar in one place, of 16 pesos per dollar in another, and of 10 pesos per dollar in a third place--all being cases of import substitution...A country gains by moving towards equalization of the domestic resource costs of different import substitute activities." Since the measure of the DRC used here, viz., factor use in each activity evaluated at market prices compared to value added at international prices. is equal, in a standard trade model, to one plus the effective rate of protection (ERP), the above is equivalent to arguing that

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[23]This subsection relates the present paper to some earlier literature and is somewhat more demanding. Readers prepared to accept the conclusions of paragraph 47 might omit it without disadvantage.

unequal ERPs are undesirable, from which the optimality of uniform ERPs follows directly.

45. The difficulty with this argument is the following. It has been shown by Srinivasan and Bhagwati (1978), for example, that DRCs evaluated at market prices of factors have no welfare significance in a distorted economy. The argument is straightforward. With distortions, the real opportunity cost to the economy of employing or withdrawing a factor from a particular activity is given by its marginal product in that activity evaluated, in the case of tradeables, at their world prices and not their market prices. To make statements on welfare in such an economy it is therefore necessary to use the real opportunity costs of factors in calculating the DRCs. Since only DRCs calculated using the real opportunity costs of factors have any welfare significance, and since this is not the case for DRCs calculated at market prices, which latter equal one plus the ERP, Srinivasan and Bhagwati argue that "it is best therefore to drop the terminology and concept of ERPs altogether from cost-benefit analysis."

46. Harberger's claim on the superiority of uniform ERPs may however be established using a different line of argument that makes the protection constraint on economic policy making explicit. If the objective is (i) to extend special treatment to a subset of sectors in the economy (e.g., manufacturing) compared to the rest of the economy and (ii) to preserve uniformity of treatment within that targeted subset, a form of protection constraint due to Bertrand (1972), it is clear that policy interventions would discriminate in favor of the subset compared to those outside but not within it. If there were no economic cost to providing subsidies, i.e., if the latter could be costlessly raised through lump sum taxation, the above objective would be achieved by a uniform subsidy to producers within the targeted sector.

Furthermore, this uniformity would lead to effective rates of protection if the aim were to encourage value added, i.e., gross output net of intermediate inputs, in the targeted sectors. However, the argument refers not to distortionary tariffs at all but to production subsidies financed by lump sum taxation. In particular, as pointed out in Mitra (1987), if subsidies may not be raised except via distortionary taxation, the economic costs of the latter would have to be taken into account, undermining the uniformity argument. Since revenue and administrative constraints preclude most developing countries from assisting local production via subsidies and since most tax administrators do not have access to lump sum instruments to finance those subsidies, it must be concluded that this special case is of virtually no interest for policy. On the other hand, as argued in the present paper, Harberger's recommendations on uniform tariffs, together with uniform indirect taxes, if combined with exemption of nonmarketed food and supplementary taxes on luxuries, though not optimal, are likely to be reasonably good rules of thumb in a wider class of situations.[24]

47. It is now generally known that uniformity is not optimal except in very special cases. The above discussion implies that the value of analytical tax-cum-tariff studies for policy making would be considerably enhanced if attention were to be paid to identifying circumstances under which the pursuit of uniformity of taxes-cum-tariffs, supplemented by higher taxes on domestically produced and imported luxuries, would be seriously inappropriate. Thus, for example, the earlier discussion of this section focussed on weaknesses in income support mechanisms and income taxation as an important reason for introducing

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[24]This is also the position taken in Balassa (1989b) in a paper that synthesizes disparate literatures into a consistent package for policy makers.

distributionally-oriented differentiation in the value added tax. Recent research suggests that uniform VAT structures may also be seriously inappropriate in economies where the public sector, for example, is characterized by extensive price controls.[25] The pursuit of appropriate rules of thumb has thus made more progress with respect to the design of tax structures compared to that in the area of simultaneous tariff-cum-tax design.[26]

V. THE REFORM OF TAXES-CUM-TARIFFS

48. Policy advisors are rarely in a position of being called upon to design a country's tax-cum-tariff structure de novo. The more typical situation is one where the anti-export bias of the trade regime is high on account of import tariffs and quantitative restrictions and must be reduced. At the same time, revenue constraints are typically acute, so that accompanying fiscal adjustments are necessary to preserve macroeconomic stability.[27] How could the ideas on desirable structures developed in Section IV above be used to guide the reform?

Nontariff Import Restrictions

49. The relaxation and ultimate removal of quantitative restrictions and import licenses is a standard component of trade liberalization. Countries have tried different schemes in this regard[28]; to the extent these involve the

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[25]See Heady and Mitra (1990).

[26]An attempt in this direction is contained in Mitra (1990).

[27]The raising of tariffs that are currently lower than the 10-15% range but are called for on grounds of protection will of course usually alleviate conflicts with revenue goals.

[28]These are outlined in World Bank (1989b).

replacement of those restrictions by tariffs, this stage of reform is revenue-enhancing. Two points deserve mention here. First, since quantitative restrictions are protective in intent, their replacement by tariffs should be reflected in the customs duty and not in the sales tax/VAT on imports. Second, this change increases the dependence of public revenue on tariffs till such time as the country reduces protection and switches from tariffs to less discriminatory sources of revenue such as the sales tax/VAT.

Tariff Reduction

50. Before analyzing the consequences of reduction of protective tariffs, it may be observed that an easy stage of "reform" is provided by the lowering of tariffs that are set so high that their lowering would raise revenue. This would also raise protection for domestic import-competing producers while reducing protection, in the case of intermediate goods, for domestic users of the product.

Matching Sales Tax/VAT

51. The integrated approach to tax-cum-tariff analysis suggests that protection and revenue issues arising in subsequent tariff reduction be handled as follows. It is desirable to transfer the role of protection to customs duties. To that end, the sales tax/VAT on imports and domestic transactions should be matched, so that both are taxed at the same rate. Customs duties which are levied on commodities for which there is no domestic production and which are therefore purely revenue-raising should be brought under the sales tax/VAT.[29]

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[29]Since there is no domestic production of these items, there will be no revenue collected under those items from the domestic sales tax. However, this does not affect the principle that the rate applying to these items under the sales tax should be the same irrespective of whether the source of supply is imports or possible future domestic production.

52. It is recognized that the matching of the sales tax/VAT with respect to rates does not necessarily imply that the effective rate, defined as the revenue collection divided by the base, will be the same for imports and domestic production. This is because collection costs are usually higher for domestic taxes compared to trade taxes. The World Development Report 1988 reports that the administrative costs of trade and excise taxes range from 1 to 3 percent of revenue collected, whereas the corresponding figure for VATs can be as high as 5 percent.[30] What is relevant in switching from protective customs duties to a VAT, however, is not the average administrative cost reported above, but rather the marginal administrative cost of collection; no evidence is available on the extent to which these differ across taxes. Nevertheless, it is in practice the case that satisfactory matching of the sales tax/VAT will require a concomitant strengthening in domestic tax administration.

Adjusting Taxes for Revenue

53. To illustrate the kinds of adjustments that are necessitated by revenue considerations, it proves convenient to return to the numerical example of paragraph 9. Recall that the c.i.f. price of the imported good was 100, the customs duty 20% and the sales tax 10%, so that the producer price was 120 and the consumer price was 132. A lowering of the customs duty by say, 50%, reduces the producer price to 110. However, since sales taxes are levied on the customs duty-inclusive price, this also reduces the consumer price to 121 [= 110(1 + 0.1)]. But protection refers to the wedge between the producer price and the world price and should not involve reducing consumer prices as well. Hence reduction of protection per se, interpreted as a narrowing of the wedge

[30]The corresponding figure for personal income taxes is reported to be 10%.

between producer prices and world prices, would be achieved by combining the lowering of customs duties with an equal upward adjustment of the sales tax/VAT structure so as to restore the tax wedge between consumer prices and world prices prevailing before the tariff reduction. In that case, it would be necessary to simultaneously increase the rate of sales tax to 20%. Since, unlike the customs duty, the sales tax applies to imports as well as domestic production, this combination of changes is revenue-enhancing. Thus, if the import and domestic tax bases were unchanged, an assumption made here for expository convenience, the collection from customs duties and sales taxes on imports taken together would be unchanged (with customs duty collections falling by 50% and sales tax collections rising by roughly 83%). If the sales tax applies equally to domestic production, the revenue from this source increases by 83%. Lest this seem puzzling, recall that customs duties are a subsidy to producers. A reduction in those duties, when accompanied by a sales tax adjustment to maintain the revenue-raising wedge between consumer prices and world prices, must therefore increase revenue. From this revenue estimate, however, must be subtracted, if any, the increased cost that is incurred in collecting the extra sales tax/VAT revenue, net of the cost saving arising on the customs side. While unavailability of marginal collection costs precludes these from being quantified, it is worth bearing in mind that successful reform will require a reallocation of resources across the units entrusted with administration of the different taxes.

54. Readers will recognize that a somewhat extreme example is being sketched here. The subsidy implicit in protective tariffs is being lowered and the sales tax increased by the full amount of that reduction. But this serves to bring out clearly the main point, which is that reduction of protection per

se necessarily requires a coordinated reform of tariffs and domestic indirect taxes. If the sales tax/VAT is thus adjusted, it will be possible to generate extra revenue, some of which could be used to extend adjustment assistance, preferably through the budgetary process, to producers adversely affected by the tariff reduction.

55. It follows from the above argument that a smaller upward adjustment in the sales tax/VAT structure will suffice to make the reform revenue-neutral. Once again, for purposes of illustration, if the domestic sales tax base is 50% higher than that for imports, it is easily seen that the sales tax rate would have to increase from 10% to around 14%-or by 40%-to offset the revenue losses from tariff reduction.[31] A larger adjustment than the above would of course be required to raise the revenue necessary to meet demands for adjustment assistance and to take into account any differences in the marginal collection costs of sales tax/VAT compared to protective customs duties.[32]

Revenue and Protection Constraints on Reform

56. The extent to which revenue as opposed to protection considerations limit the reduction of protective tariffs depends ultimately on administrative constraints to expansion of the domestic tax base. While this will necessarily vary from country to country, the following general point may be made. The evidence cited earlier in the paper shows that the importance of trade taxes in public revenue declines with per capita income. This implies that

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[31]If M is the import base and D the domestic sales tax base, pre-reform revenue equals 1.32M + 1.1D. If x is the sales tax rate after the reform, revenue equals (1 + x)(1.1M + D). Since D = 1.5M, the two are equal and the reform revenue-neutral when x = 0.142.

[32]Mexico offers an example where the introduction of a VAT three years before the 1983 trade reform allowed revenue losses to be offset through increases in domestic indirect taxes.

administrative constraints to identification of revenue sources alternative to trade taxes can be expected to be most acute in the low income countries. This might encourage the conclusion that a reduction of protective tariffs would rapidly encounter revenue constraints in such countries. Against that, however, must be set the observation that the low income countries do not have a diversified manufacturing sector and therefore that many of their import taxes will be mainly revenue-raising rather than protective. Since trade liberalization should pertain to the reduction of protective rather than purely revenue-raising tariffs, with the latter being absorbed within the sales tax/vat, the extent of revenue loss arising from this reduction will be considerably smaller, thus requiring a more modest offsetting adjustment in domestic tax structures.

57. The extent to which protection considerations themselves limit the reduction of protective tariffs depends on the ability of import-competing producers to preserve the tariff-induced implicit subsidy enjoyed by them as well as the other instruments available to the government. Since existing tariff levels in many countries are well in excess of the recommended range of 10-15%, it is clear that a very significant reduction in protection is involved in moving to an outward-oriented development strategy. Producers will require considerable time to adjust to such changes; the magnitude of this adjustment is essentially the same whether protection is reduced by cutting tariffs on final goods, raising tariffs on intermediate goods or levying taxes on domestic production of final goods. The desired changes could therefore be facilitated by extending other forms of assistance to them; this theme is further developed in paragraph 59.

58. Finally, it may be noted that no reference has been made to two paths to tariff reform that have been discussed in the trade literature.[33] One is the "concertina' method which collapses the structure by reducing the top rate at each step of the transition to the next highest level, while leaving other rates the same. A second is the "radial" method whereby at each stage all tariffs are reduced to a fraction of their previous levels. However, the conditions under which these paths to reform improve matters are stringent. Thus, the "concertina" method, to be welfare-improving, essentially requires substitutability among commodities, a feature that is almost certainly false when intermediates and capital goods are imported as well as final goods. The "radial" method, on the other hand, is welfare-improving (i) either if there are no domestic taxes (ii) or, more generally, if those taxes are also reduced radially, in either of which cases the country's revenue base would suffer significant erosion. Furthermore, the methods require the government to be able to offset the revenue gains and losses at each stage through lump sum taxes and subsidies, a feature that greatly limits their relevance for policy. As against that, it is not known whether these rules perform reasonably well as rules of thumb in a class of situations wider than those where they can be shown to be desirable. In practice, it would be preferable at the outset to preannounce the desired tariff structure as well as a realistic timetable that allows producers to adjust towards it.

Towards Explicit Assistance

59. Reference has also been made above to revenue needs arising from demands for adjustment assistance by producers adversely affected by tariff reduction. Thus, it is sometimes the case that a tariff on a key intermediate

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[33]For an extended discussion, see Corden (1974).

good such as steel is imposed to protect one or two large and visible high-cost local producers, possibly but not necessarily in the public sector. Reduction of the tariff on steel is recommended in order to make downstream producers, say producers of light engineering goods, more competitive in export markets. While the latter is an objective with which the government is in agreement, concern is however expressed that the reform would make local producers of steel uneconomic, threatening jobs and leading to other negative consequences. In such a situation, the affected producers are few and visible and almost certainly registered with the domestic tax authorities. It would therefore be administratively feasible to extend assistance to those producers via subsidies, with the required revenue coming from the sales tax/VAT adjustment made in combination with the reduction in protective customs duties. Such a policy, in contrast with tariff protection, would have the advantage of being explicit and therefore subject to periodic budgetary scrutiny. There is therefore some likelihood that such assistance would be more timebound and less "permanent" than assistance via tariffs. Hence this is a policy change that should be suggested in such cases.[34]

VI. CONCLUSIONS

60. The main points emerging from the analysis may be summarized as follows.

(1) Since it is generally accepted that lack of supportive macroeconomic policies has led to delays or reversal in trade liberalization programs, it is important that potential losses in public revenue arising from

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[34]A recent review of the Bank's approach to subsidies, Myers and Brondolo (1986) took the view that explicit subsidies are preferable to implicit subsidies and that it is undesirable to finance subsidies through nonbudgetary instruments.

tariff reductions to be offset so as not to exacerbate macroeconomic difficulties. The common practice of pursuing tariff and tax studies independently carries the risk that the revenue implications of tariff reform and the implications for protection of tax reform may not be properly integrated, with negative consequences for the credibility of policy change.

(2) The adoption of a more comprehensive public finance perspective on policy reform is made possible by the fact that even the poorest countries have essentially two sets of instruments for the taxation of imports: (a) customs duties and (b) sales taxes/value added taxes, that are usually levied on the customs duty-inclusive value of imports and that apply to domestic transactions as well. Since the customs duty raises the price facing producers of an import above the world price, it is a subsidy to domestic producers. Since the sales tax/value added tax, together with the customs duty, raises the price facing users of the import above the world price, they constitute a tax on domestic users. The customs duty can then serve protection objectives, while the two together can be designed to meet revenue requirements.

(3) The following integrated structure of taxes cum tariffs provides a point of reference towards which reforms may be directed. This comprises (a) a basic customs duty at a uniform rate of no more than 10 to 15 percent, (b) a basic value added tax, preferably of the consumption type, applying at a uniform rate depending on revenue requirements, to domestic production and imports, and exempting agriculture, in particular nonmarketed food consumed by the poorest, (c) a luxury rate of excises applying at a common rate to domestic production and imports of selected items, (d) zero rating of exports under the value added tax, (e) exemption of imported inputs entering export production from customs duty, and (f) taxes on selected exports either where world demand for the

country's exports is expected to remain inelastic or where the country is subject to export quotas or where there are significant constraints on land or income taxes. The paper argues that it is important to view the above elements as part of an interrelated package so that, for example, attempts to unify customs duties at levels higher than the recommended range [as in (a)] would create administrative problems in implementing duty exemptions on inputs entering export production [point (e)].

(4) The above prescriptions must be regarded as rules of thumb that can generate broadly acceptable outcomes in terms of efficiency, equity and protection and that should be flexibly applied in the light of country circumstances and administrative capability. They are not properties of optimal tariff and tax structures. Thus the value to policy advisors of analytically-oriented studies of taxes and tariffs would be enhanced if the latter were to identify circumstances where the pursuit of such rules is likely to be inappropriate, rather than construct empirically implausible special cases where they hold exactly.

(5) The coordinated reform of an existing distorted structure of tariffs and domestic taxes in accordance with the above principles will include the following components. The sales tax/VAT rates on domestic production and imports should be matched, so as to transfer the function of protection to customs duties. Customs duties on items for which there is no domestic production and which are therefore purely revenue-raising should be brought under the rubric of the sales tax/VAT, i.e., apply at the same rate to imports and possible future domestic production. A lowering of customs duties to reduce the excess of producer prices over world prices (the element of protection), if unaccompanied by other measures, would also reduce the excess of user prices

over world prices (the customs duty-cum-sales tax on users) and thus erode public revenue. Hence reduction of protection per se, interpreted as a narrowing of the wedge between producer prices and world prices, is achieved by combining the lowering of customs duties with an equal upward adjustment to the sales tax/VAT structure to restore the tax wedge between user prices and world prices prevailing before the tariff reduction. Thus, however, would be revenue-enhancing because the sales tax/VAT applies to imports as well as domestic consumption, so that the higher rate structure, while exactly offsetting the revenue loss from customs duties on imports, would bring in more revenue from domestic consumption. If the objective is simply to offset the revenue losses from tariff reductions, a smaller adjustment to the sales tax/VAT structure than the one described above will suffice. More realistically, the rate structure would need to be raised somewhat beyond the point of revenue-neutrality so as to allow the government to meet such demands for adjustment assistance as may arise from sectors adversely affected by tariff reductions. Such assistance, if extended via the budgetary process, would have the advantage vis-a-vis protective tariffs of being explicit and thus subject to periodic scrutiny.

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